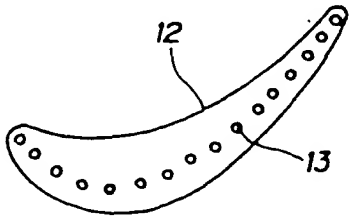
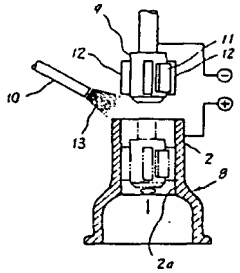
(54) PREVENTION OF SHORTCIRCUITTING AND CONTROL OF TOOL IN ELECTROLYTIC PROCESS
(11) 4-13519 (A) (43) 17.1.1992 (19) JP
(21) Appl. No. 2-115914 (22) 7.5.1990
(71) MITSUBISHI HEAVY IND LTD (72) JUNJI NOMURA
(51) Int. Cl⁵. B23H3/02

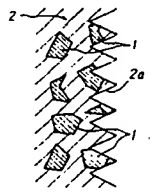


PURPOSE: To prevent current shortcircuitting in an electrolytic process by stopping the process as a tool reaches a preliminarily set work position in the electrolytic process, retracting the tool to the start point by inverse rapid traverse, and cleaning it.

CONSTITUTION: Where the length of a cooling hole 13 bored in a first stage gas turbine moving blade 12 is 150mm, with that of the second stage gas turbine moving blade 12 being 230mm,. a tool is sent by normal rapid traverse from the start point to 10mm before a process origin, and it is changed to a first cleaning cycle at the position of 80mm, while it is changed to the cleaning cycle at 150mm and 200mm for the second stage gas turbine moving blade 12. The work feed speed is set at about 1mm/min., the normal rapid traverse speed is about 300mm/min., the normal reduced speed traverse speed is about 10mm/min., and the inverse rapid traverse speed is about 100mm/min. Shortcircuitting at the time of an electrolytic process can thus be prevented.

(54) PROCESS TO SURFACE OF HIGH SILICONE ALUMINUM BORE
(11) 4-13520 (A) (43) 17.1.1992 (19) JP
(21) Appl. No. 2-115278 (22) 2.5.1990
(71) NISSAN MOTOR CO LTD (72) MASAHIKO IIIZUMI
(51) Int. Cl⁵. B23H5/00,B23H5/06



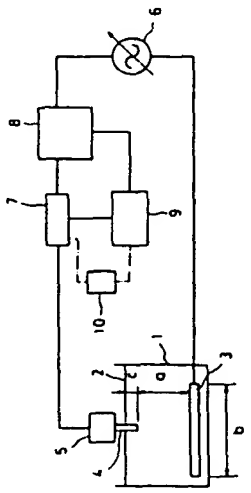


PURPOSE: To reduce the number of processes by supplying electrolytic polishing liquid to the surface of a cylinder bore, while applying a voltage for a positive pole of a cylinder block and a negative pole of an electrode provided at a honing head for honing work,

CONSTITUTION: A grinding stone 12 is installed at a honing head 9 for applying a finishing honing work to a cylinder bore surface 2a to finish it smooth, while applying an electrolytic honing work to decompose aluminum in the cylinder bore surface 2a by electrolysis and protrude only a very small quantity of primary crystal silicone 1. In this electrolytic honing work for finishing, a cylinder block 8 is set for a positive pole, and the honing head 9 and an auxiliary electrode 11 are set for negative poles, where a voltage is applied, and a sufficient quantity of electrolytic polishing liquid 13 is supplied from a nozzle 10 into a cylinder bore, while the honing head 9 is inserted into the cylinder bore as shown by a supposed line, and rotated and elevated as shown by arrows. The number of processes can thus be reduced.

2: cylinder bore part, 8: high silicone aluminum cylinder block

(54) ELECTROLYTIC POLISHING DEVICE FOR PROBE
(11) 4-13521 (A) (43) 17.1.1992 (19) JP
(21) Appl. No. 2-117838 (22) 8.5.1990
(71) DENKI KAGAKU KOGYO K.K. (72) KENICHI EBARA(2)
(51) Int. Cl⁵. B23H9/08,C25F7/00



PURPOSE: To produce probes having a good axial symmetry and a good surface formation effectively and stably in an electrolytic polishing device by setting an immersed quantity of a probe material, a distance from a counter electrode, a ratio between the distance and the length of one side of the counter electrode, and a response time of a current disconnecting device at specified values.

CONSTITUTION: For an electrolytic polishing device having a holding means 5 for holding a probe material 4 in electrolysis 2 vertically having a vertical fine adjustment function, a flat counter electrode 3 disposed facing the probe material 4 just under it, a current detecting means to detect an electrolytic current, a setter 9 for setting a current value or energizing time for the electrolytic current, and a device 8 for disconnecting the electrolytic current by an output of the setter 9 an immersed quantity C of the probe material 4 is set at less than 2mm, a distance (a) from the counter electrode 3 is set at more than 5mm, the ratio of a length (b) to this distance is set at more than 0.5, and a response time of the current disconnecting device 8 is within 10msec. By this setting the current value or time at completion of electrolytic polishing, or changing the power voltage in steps up to the voltage at the time, probes of a desired radius of curvature can be manufactured effectively.